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NOTICE OF ALLOWANCE AND FEE(S) DUE

909 7590 07/09/2009

PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

KITOV, ZEEV V

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 07/09/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,906

11/21/2005

David McLeod

017058-0310800

7008

TITLE OF INVENTION: NETWORK BUS COUPLER AND SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	10/09/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

909 7590 07/09/2009

PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,906	11/21/2005	David McLeod	017058-0310800	7008

TITLE OF INVENTION: NETWORK BUS COUPLER AND SYSTEM

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	10/09/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
KITOV, ZEEV V	2836	361-110000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/522,906	11/21/2005	David McLeod	017058-0310800	7008
909	7590	07/09/2009	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102			KITOV, ZEEV V	
			ART UNIT	PAPER NUMBER
			2836	
DATE MAILED: 07/09/2009				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 47 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 47 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	10/522,906	MCLEOD ET AL.	
	Examiner	Art Unit	
	ZEEV KITOV	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/15/09.
2. ☒ The allowed claim(s) is/are 1 - 12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Examiner acknowledges a submission of the arguments filed on June 15, 2009.
Applicant's arguments have overcome rejections under 103(a).

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

An amended independent Claim 1 discloses a network bus coupler mountable on a circuit card, the network bus coupler comprising: a housing; electrical isolation circuitry disposed within the housing; and connectors disposed exterior of the housing and extending outwardly from the housing, the connectors being electrically coupled to the electrical isolation circuitry and configured to engage at least some sockets of the circuit card, wherein the network bus coupler is configured to couple a bus to a device connected to the circuit card, the bus and the circuit card disposed exterior of the housing, and wherein a first plurality of the connectors extending outwardly from the housing is configured to be coupled to the bus via the circuit card and a second plurality of the connectors extending outwardly from the housing is configured to be coupled to the device via the circuit card.

The closest references for the claim are Norton et al. (US 4,808,115), Olsson (US 5,949,300) and Fayfield (US 5,644,730). Regarding Claims 1 and 11, Norton et al. disclose a housing of a module (12 in Fig. 1 and 12 in Fig. 3) and connectors (16, 18 in Fig. 1 and 50 in Fig. 3) to the housing (col. 8, line 43 to col. 9, line 44); the connectors (16, 18 in Fig. 1, 50 in Fig. 3) are configured to be coupled to the mother circuit card (20

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in Fig. 1 and 3, col. 6, line 63 – col. 7, line 14). Application does not disclose plurality of connectors, it rather discloses a plurality of pins shown in Fig. 3 - 6 and disclosed in [0019] and [0022]. Therefore the connectors may be interpreted as contact pins. The plural connectors (16 in Fig. 1, 50 in Fig. 3) are disposed exterior to the housing (col. 1, lines 14 – 42). Pins of connectors are extended outwardly from the housing (62 in Fig. 3, 4). The connectors being configured to inherently engage at least some sockets of the socket card (20 in Fig. 1, 3), since it is what the connector is used for. Norton discloses the LRM modules as being itself “a circuit card” or daughter board, which in order to interact with shipboard electrical system is interconnected through a mother circuit board (20 in Fig. 1 and 3, col. 1, lines 14 – 42, col. 6, line 63 – col. 7, line 14), which reads on circuit card.

However, it does not disclose an isolation circuitry within the housing. Olsson discloses the isolation circuitry, such as isolation transformers (25, 27 in Fig. 1) located within the housing (41 in Fig. 1). Olsson also discloses his isolation means being located inside the shielded housing (41 in Fig. 1). The reference is pertinent to the case since it deals with the communication bus wiring connections and particularly discloses isolation of the bus elements.

In the Norton et al. system modified according to teachings of Olsson the isolation transformer is located inside the housing since (a) the Olsson transformer is located in the shielded housing (see Olsson Abstract) and (b) according to Norton et al. (see Abstract), a metal shroud of the LRM connector provides EMI shielding.

According to Norton, the LRM modules include “a circuit card” or daughter board, which in order to interact with shipboard electrical system is interconnected through a mother circuit board (20 in Fig. 1 and 3, col. 1, lines 14 – 42, col. 6, line 63 – col. 7, line 14), which reads on the circuit card. Therefore, in the Norton system modified according to teachings of Olsson, any particular module similar to LRM will communicate with the shipboard electrical system (the bus) via the circuit card.

In the Norton system modified according to teachings of Olsson, the bus and the circuit card are disposed exterior of the housing (see Norton, the circuit card 20 connected to the bus is disposed exterior to the housing of the module 12).

As to a second plurality of connections (pins) extending outwardly from the module housing and being coupled to the device, Olsson discloses connection of plural channels through their own transformers to the same bus (second transformer (41 on right side) being connected to the same bus (13 in Fig. 1). Such connection inherently requires the second set of the connectors (pins) extending outwardly from the same module housing.

As to coupling the device to the bus, as was stated above, Norton discloses the device (LRM) coupled to the shipboard electrical system, which inherently has the bus, via the circuit card.

Norton further does not disclose the network bus coupler coupling a bus to a device. Fayfield discloses the bus network interface circuitry disclosed as adaptive interface card (60 in Fig. 3), which reads on network bus coupler of the claim. According

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to Fayfield, the bus network interface circuitry provides a means for the binary sensor 20 (device) to couple and communicate with a bus network of the user's choice, i.e. coupling a bus to a device (sensor). The bus network interface circuitry is determined by the bus network type chosen. According to Fayfield, the bus network interface circuitry is embodied in bus network chips that are commercially available for use and well known in the art. Examples of such chips include; Motorola MC68HC05X4 processor chip and chips of some other companies.

However, according to Claim 1 language, "a second plurality of said connectors extending outwardly from the housing is configured to be coupled to the device via the circuit card", i.e. the device is to be connected to the bus via the circuit card. Fayfield does not disclose connecting the device to the bus via the circuit card, which being combined with other limitation of the Claim makes it allowable.

The other independent claims 7 and 12 include the same limitation as recited, which being combined with other limitations of the Claims makes them allowable.

Allowability resides, at least in part, in the above-described limitations, which has not been disclosed in the Prior Art in a search.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance." Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose telephone number is (571) 272-2052. The examiner can normally be reached on 8:30 –

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5:00. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on (571)-272-7492. The fax phone number for organization where this application or proceedings is assigned is (571) 273-8300 for all communications.

/Z. K./

Examiner, Art Unit 2836

7/1/2009

/Stephen W Jackson/

Primary Examiner, Art Unit 2836